BEST AVAILABLE COPY

Fig. 1A

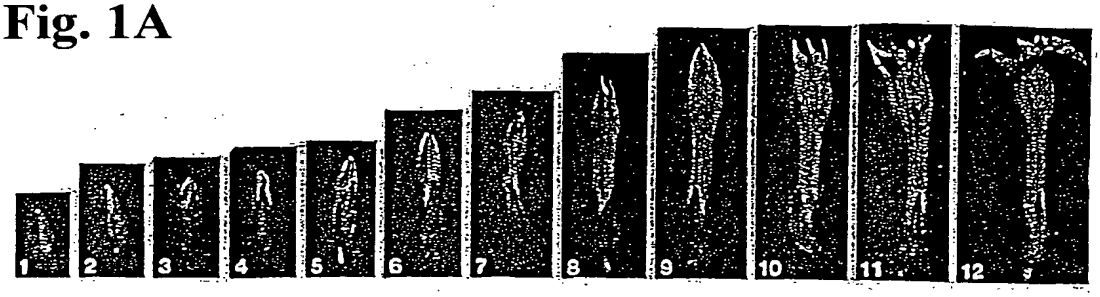


Fig. 1B

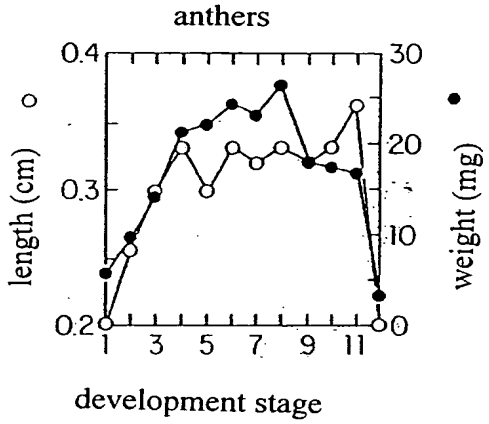
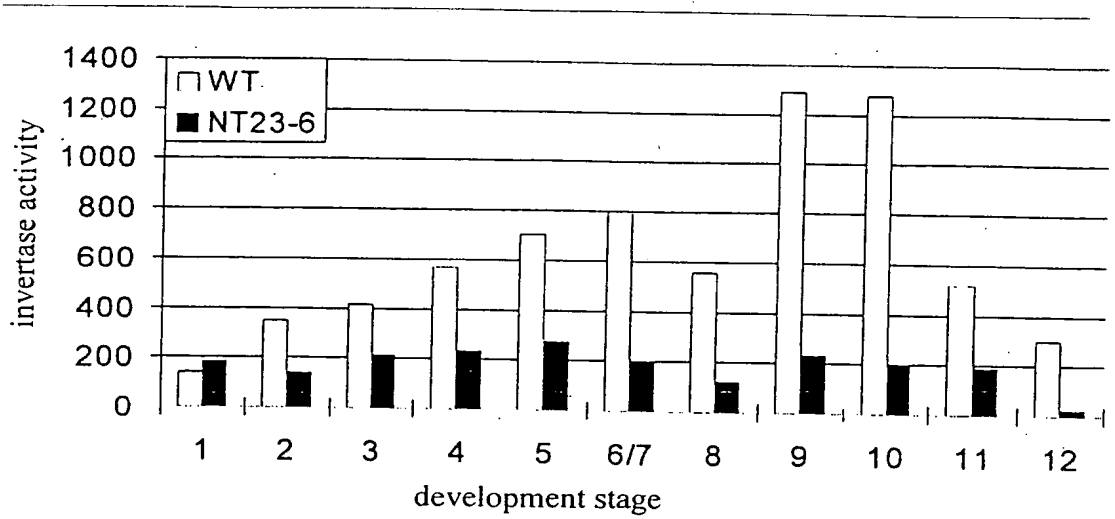


Fig. 1C



The extracellular invertase NIN88 of tobacco pollen is specifically expressed in the anthers

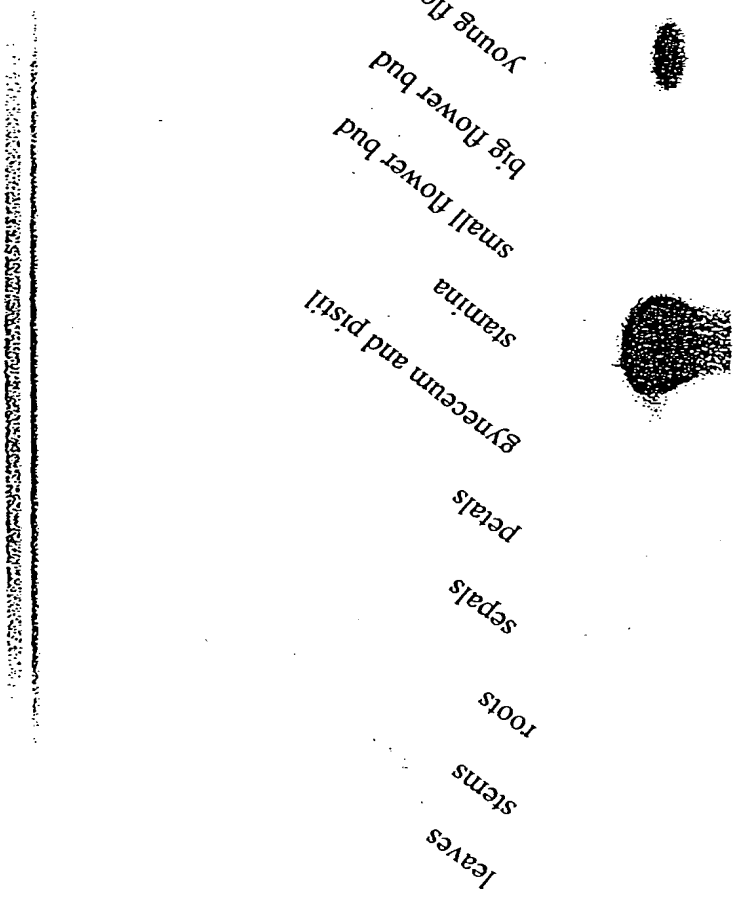


Fig. 2

Fig. 3A

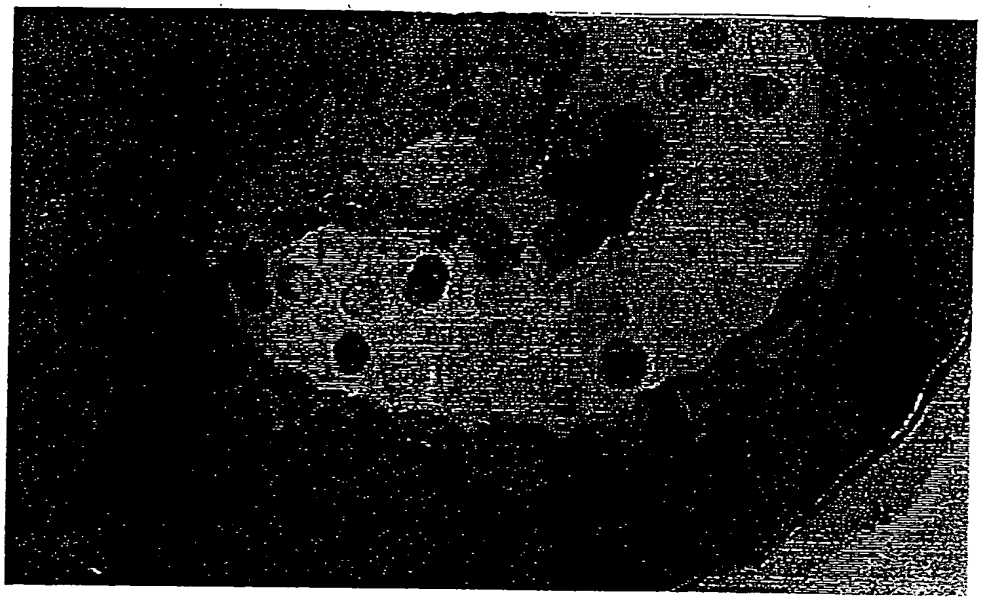


Fig. 3B

Fig. 3C

Fig. 4

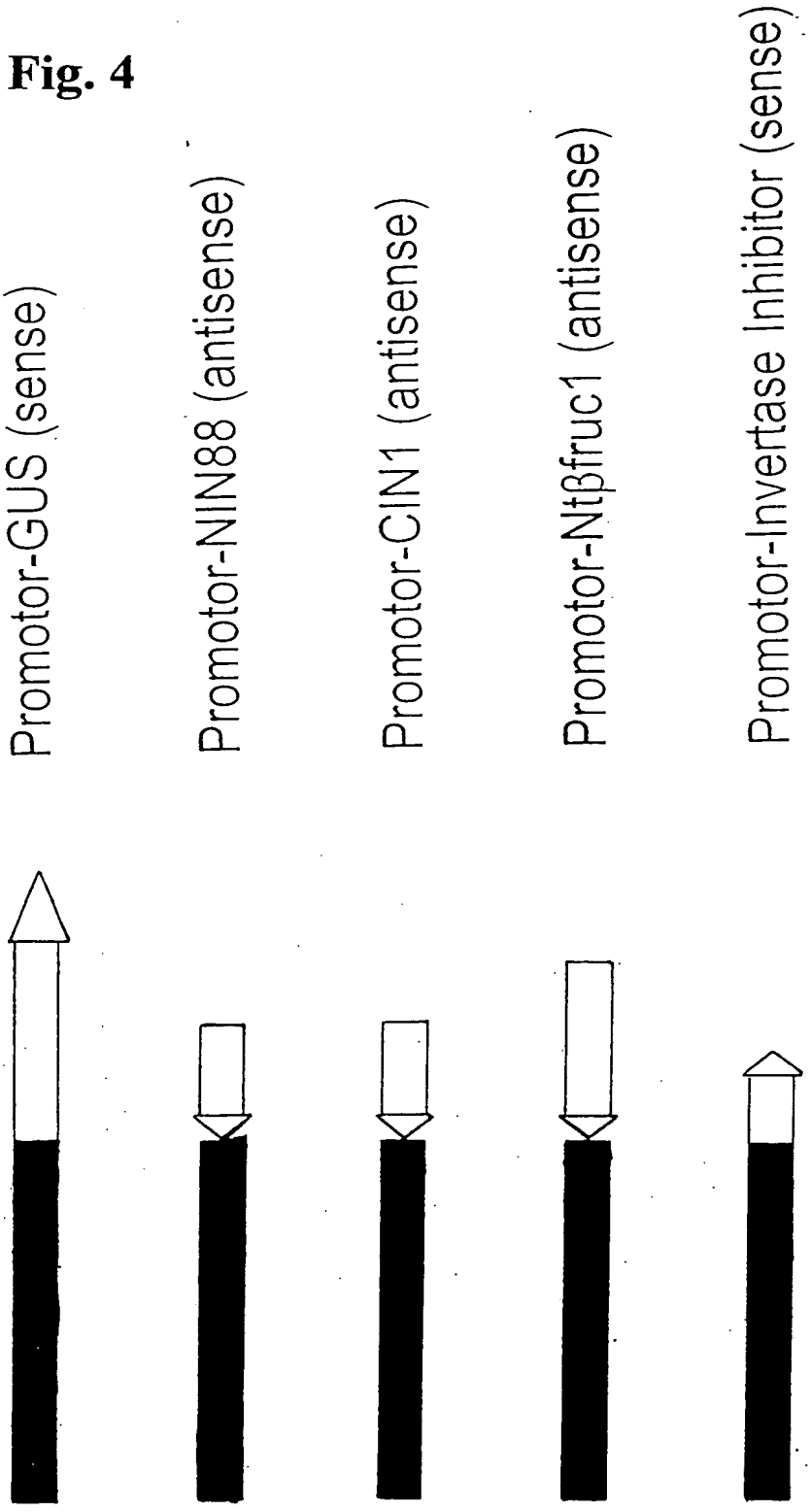

Promotor-GUS (sense)
Promotor-NIN88 (antisense)
Promotor-CIN1 (antisense)
Promotor-Ntβfruc1 (antisense)
Promotor-Invertase Inhibitor (sense)

Fig. 5A

Promoter DNA sequence of the extracellular invertase NIN88 from tobacco

```
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  51 TCGTTCAACT GCATTGTTAA AACCTGTTAG CGTGATGCAG CCCGGTACTA
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 151 GGGCCACTCC CATCGTCCAC CATAATGCGT CTTACATCTG TATCTAATAT
 201 TCGTAAAGTG ATAACGAGGG CATCATAGTG AGGGAAAACC AAACCGTGGT
 251 TATCTGACTT ATCGAAGATG ATACTTTCTT TAAGTTTCTC GTACCGTTCA
 301 TGAGTGATTA ACTGTTTGAG CTTGTGGGTT GTGGCGAACT TTACGTTGTT
 351 GATCGAAACG TCGTCTCCGC CCCCGATGAT AATGTGAATG GTGCGAGTCG
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 501 CATGTCCATG ACCTCTTGTC TTAGGGCGAT ACAATCCTCA GTTTTGTGAC
 551 CTCGCTCTTG GTGGAACTCG CAGAGGGCAT CTGATTTTCT AGTGCTTGGA
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 751 GGGCCCTCTT CGTAGCGGGA GAGGGGCATG ATGGCACTTT TGACATATGG
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 851 CATTTTGACG ATCCTTCCTG GTTTCGGCTT GTACCGAGGT CAATCGATGA
 901 GTTGGCCCAT TCAGGTCGTC TTCGTCGGCA CGGGCCTCAG CACAGTAGGC
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1251 GGGCAGCTGT GAATACCAAG TCAATGCTCC TCCGGTAAGG GTCTCGCCGA
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1351 TTTACCGCAG TGACATAATG ATTACATGAT CTTCGGGGTC GGTCGTACCA
1401 TCATAAATTT TCAGATAAGG TGGCATCTTG AACGTCTTGG GTATGGCATA
1451 TGGGGCGGCT TCATCACTGT AGGGTTGCTC GACTAACCGA CCAGCGTCTC
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1601 CATTTTCTTC AGAATGGCCG TGAGGGTGTC ATTACCTGCA TTATTAATAT
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1701 GCTGGTGCAA TGCAAGTCCT TGCATTTTCT CTAAATACCT CCTGAGTGGG
1751 TTTGTTGAGG ATGCCGGTCA GCATATTTGT CAGCCAAGCT TCGAGTAGCT
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1851 CCGCGGGATG TTGCGATACT GCTGTGAGGG AGGGGTGATC CACTTCGTCG
1901 GGGAGAGGTG TTAGGCGTTA TGCCTTCGCC TTCTATTTCG GAGACCTCAT
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2651 ATACACCAAG AATATTCAAT AAAATATTTT TTTGAATATT CTATTATAAA
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2951 TTCTTTTCAT ATCTAAGGAG TAAAGCAACC ATGAATAGAA AAGGCTTAGT
3001 AACTATATAT CAAAGGAATG GTGTTTTTTC TTTAAATATG GATAAAAATT
```

Fig. 5B

```
3051  TGTGAATATA GAAGATTAGA TCAATTAACA AAGGTTATGG TGGAGTGGTA
3101  AGCAGAGGCG GACCTATGTG TTATAGTAAG GGGTCACCCA CTACTAGAAA
3151  TCCGGTAAAG ATCGATCAAA AAACCGACCA ACATTGGTCG GTAATGGCCA
3201  AAAACTGACC AAAACGCGAT CATTTACGTG TGAACGGTAT TTTTATGGTC
3251  GGAAAGGAAT ACCGACCAAA GTTGGTCGGA AATTACCGAC CAACTTTGGT
3301  CGGTCAATTA AATTCAAAAA AAATATTGTA AAAAAAAACC GACCAAAGTT
3351  GATCGGTATT TTAATTATGT AATAAAAAGA TTCACTATCT GGGAATCGAA
3401  CCGGGGTCTG TACTATGGCA AGATACTATT CTACCACTAG ACCATTGGTT
3451  CATTTTGTTT TAAGACTGTC TTTTATTTGA TTTATACTCT TTAATTATAT
3501  TTTTGCACGA AAATAACCGA CCAAAGTTGG TCGATTTTAT TAAAAAGTAA
3551  AATTACTTAC CAAAGTTGGT CGATTTTTTT AAATGATCCG CCGAATTAAC
3601  CGACCAATTT TGGTAGGTTT TTTTAATATT AATTTTTATT TATTTTAATT
3651  GAAAAACTAA CCAAAGTTAG TCGGTTTCTT GAAACATAAA TTTCGCGGGA
3701  CTCAAAAATA GTTTCCCGCA TTTTTGCGCC AAAGAAAACC GACCAAAGTT
3751  GGTCGGTTTC GTAAAAAAAA AAAAAATTTA AAAAATATAT TTTAAAAAAC
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3901  CTGTAAGCTT CGGGAGAAAT TTTGTATATG TATATGTGTA TATCCTTAAA
3951  ATGATTAATT TAAAGAACGT GGCACCCTGA ATACTAGAAG CCTTTAGGGG
4001  CACTAGATGA GCAGAATAAC GTGTTCTCGT CGCGTAAAAA TACTTGGATC
4051  CGCCTATGAT GGTAAGTACT TCTTCGTCCT TAATCAGAGG TTTCGACTTC
4101  GAGCTCCAGA TATAAACTAT AGACTCGTCT TTATAGCACC TTTTAATAAG
4151  ACTATGACTT CATCTGATTT CTCTATAAAT ACTCCTCAAG CTTTCGGTTC
4201  TTCTCCATTG TTCAGTTTCT TTCTCCACAT CACAGAAGTG AAAACAAAAC
4251  AAGAAGAAGA AGAAGAAGAA AAATAAAGAG TTTCTGTCAA ATTAAGTCCA
4301  ATAGGGAAAA TG
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Expression of NIN88-promotor
GUS fusion in transgenic tobaccoplants

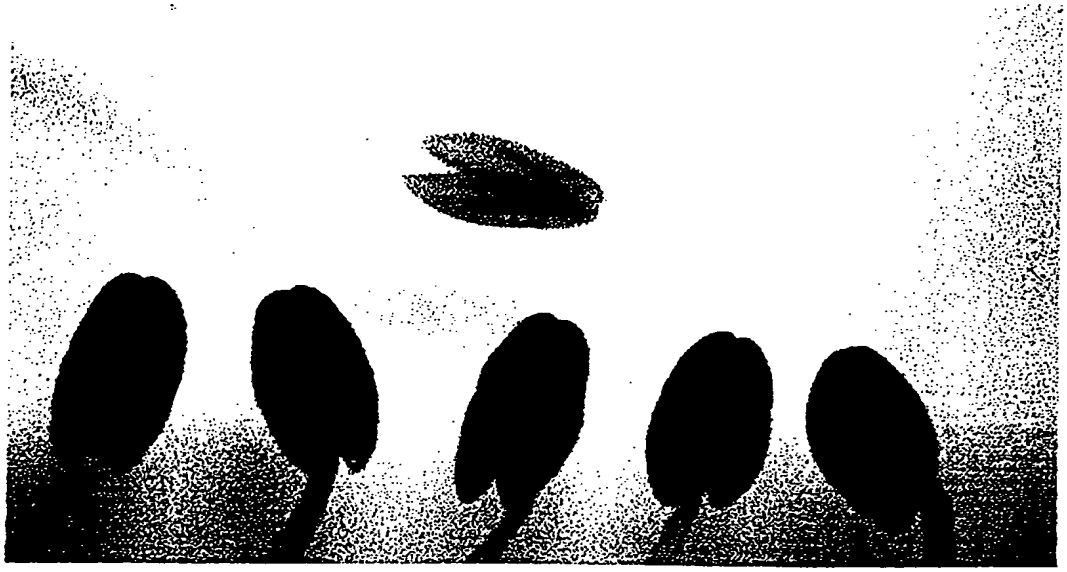


Fig. 6A

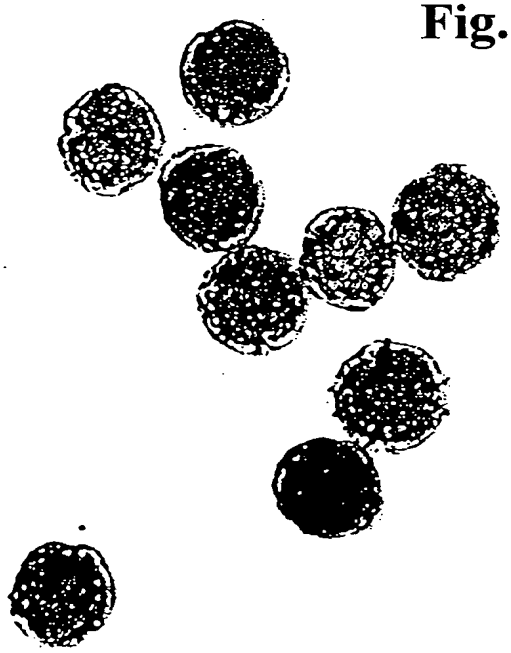


Fig. 6B

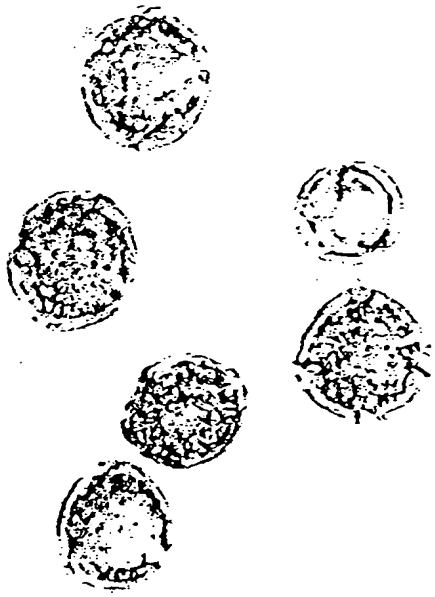


Fig. 6C

Fig. 7

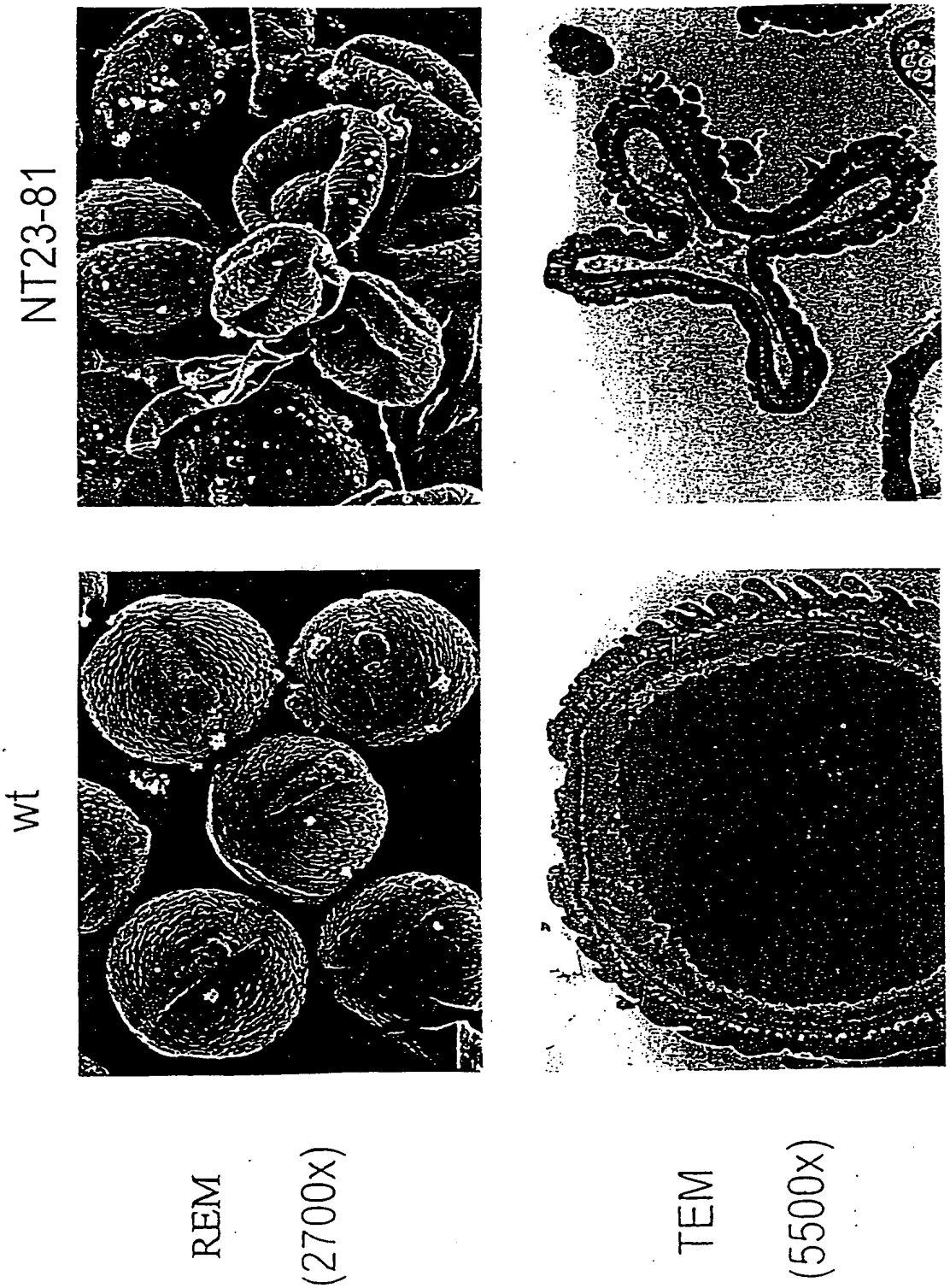


Fig. 8

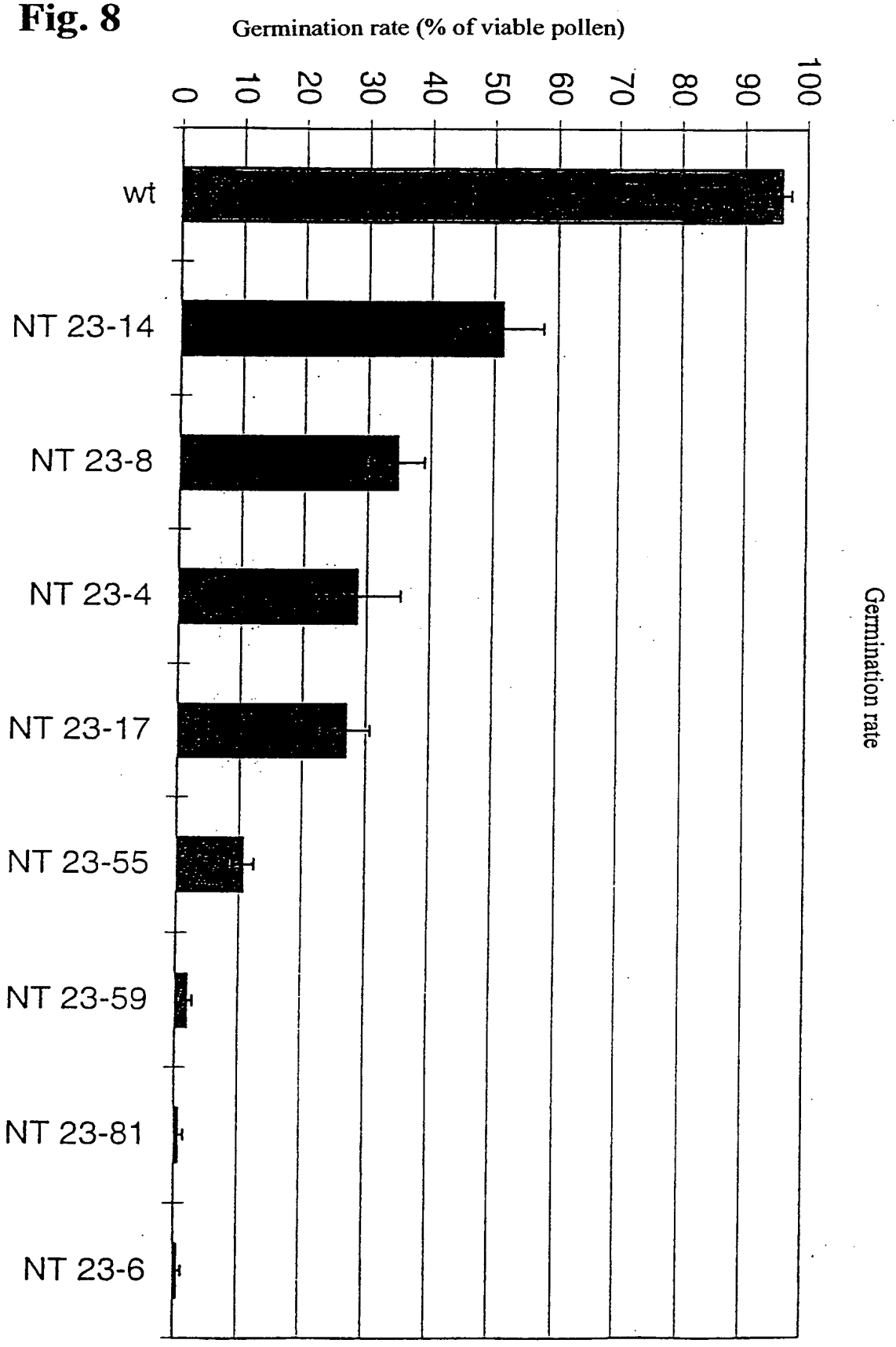

Germination rate (% of viable pollen)
0
10
20
30
40
50
60
70
80
90
100
wt
NT 23-14
NT 23-8
NT 23-4
NT 23-17
NT 23-55
NT 23-59
NT 23-81
NT 23-6
Germination rate

Fig. 9

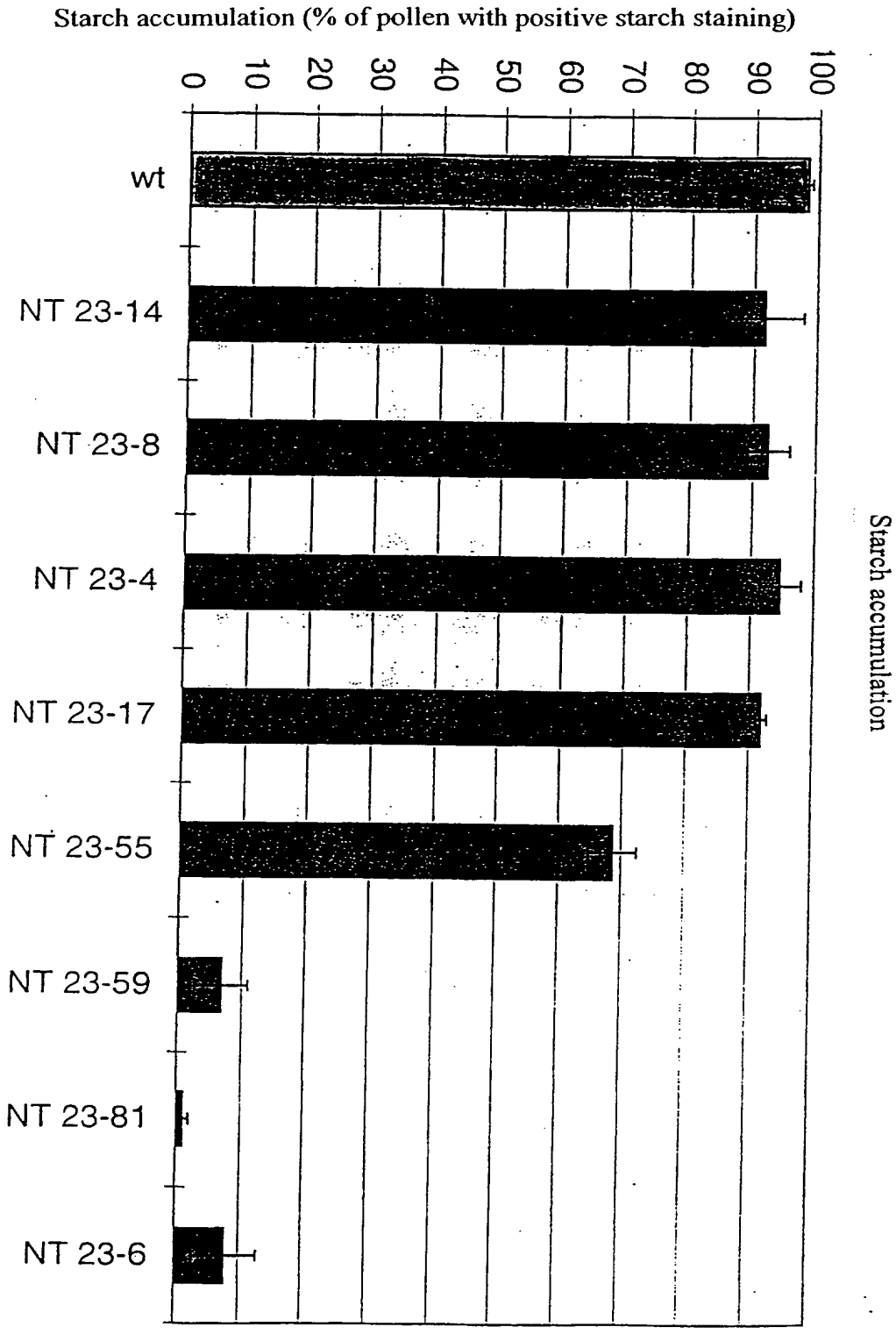

Starch accumulation (% of pollen with positive starch staining)
0
10
20
30
40
50
60
70
80
90
100
wt
NT 23-14
NT 23-8
NT 23-4
NT 23-17
NT 23-55
NT 23-59
NT 23-81
NT 23-6
Starch accumulation

Fig. 10

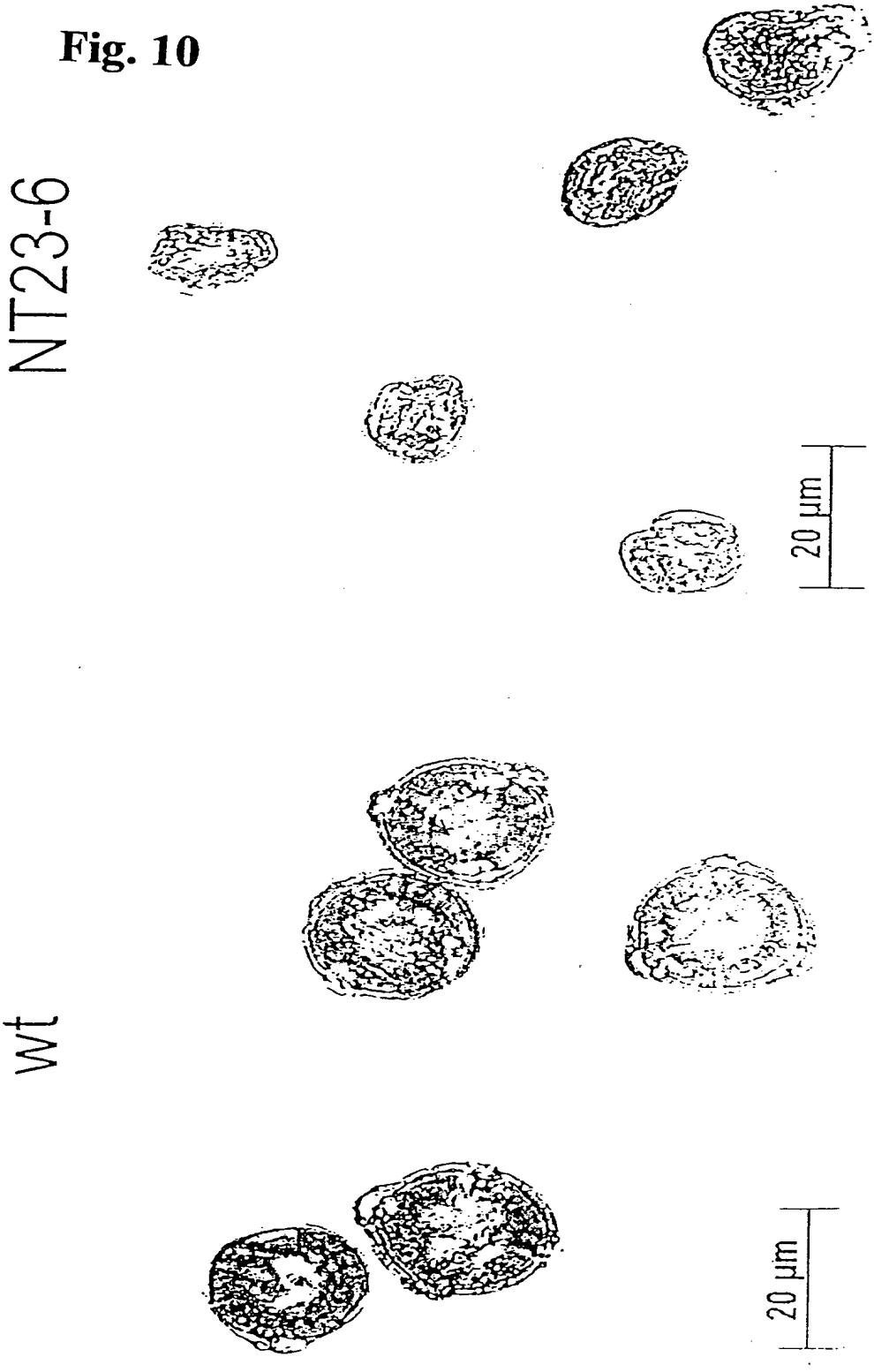


Fig. 11

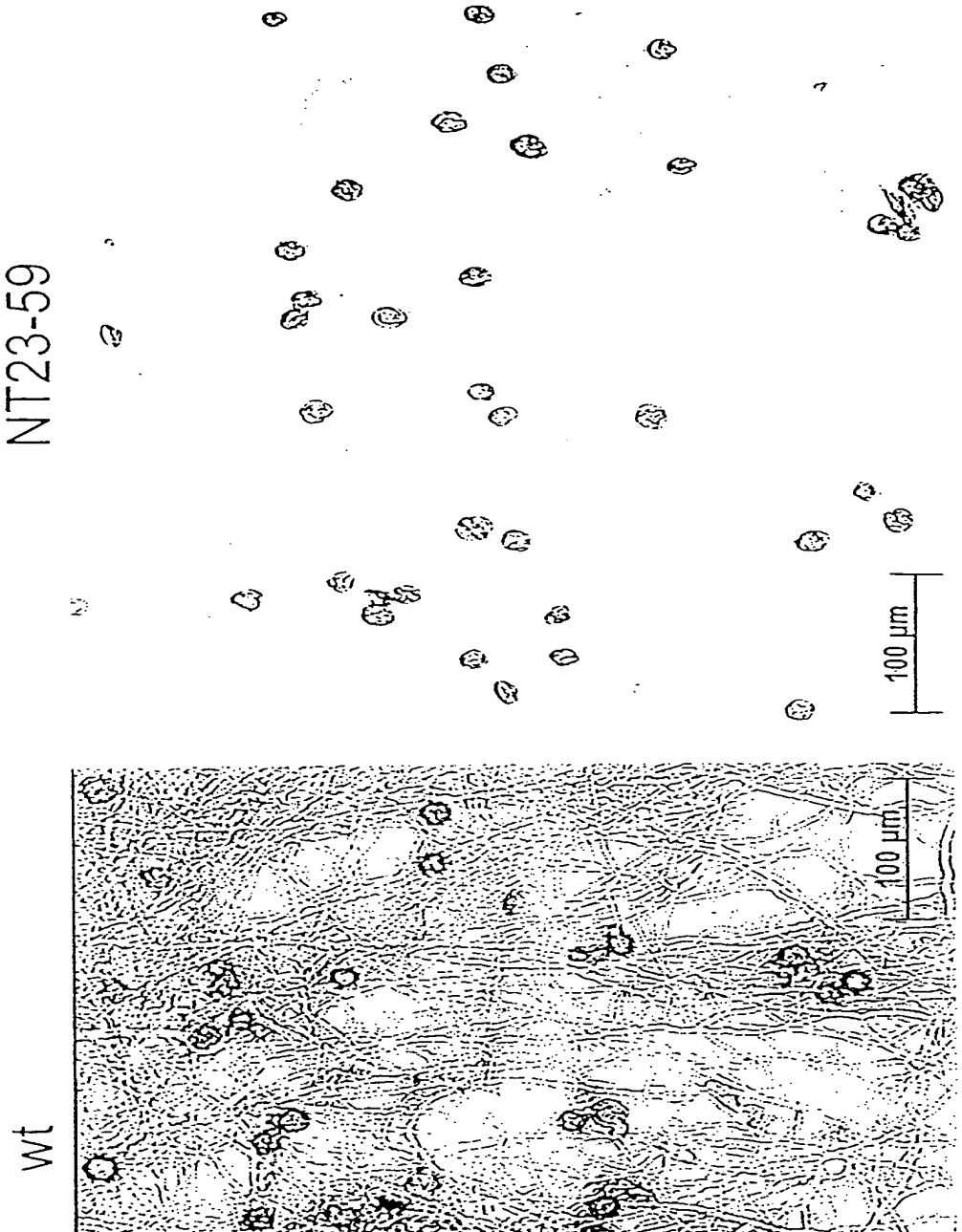
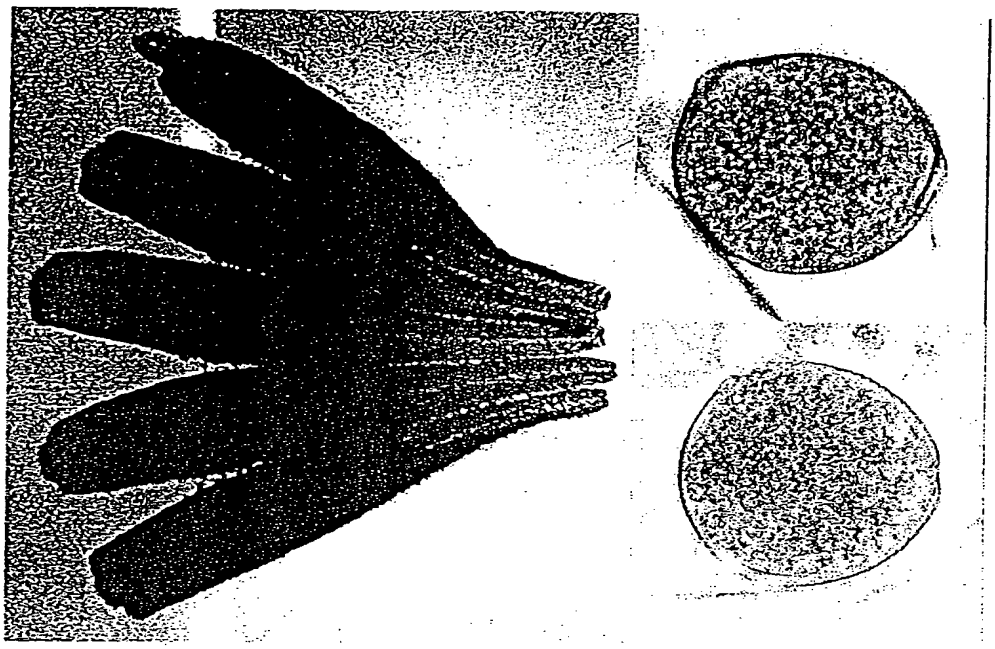
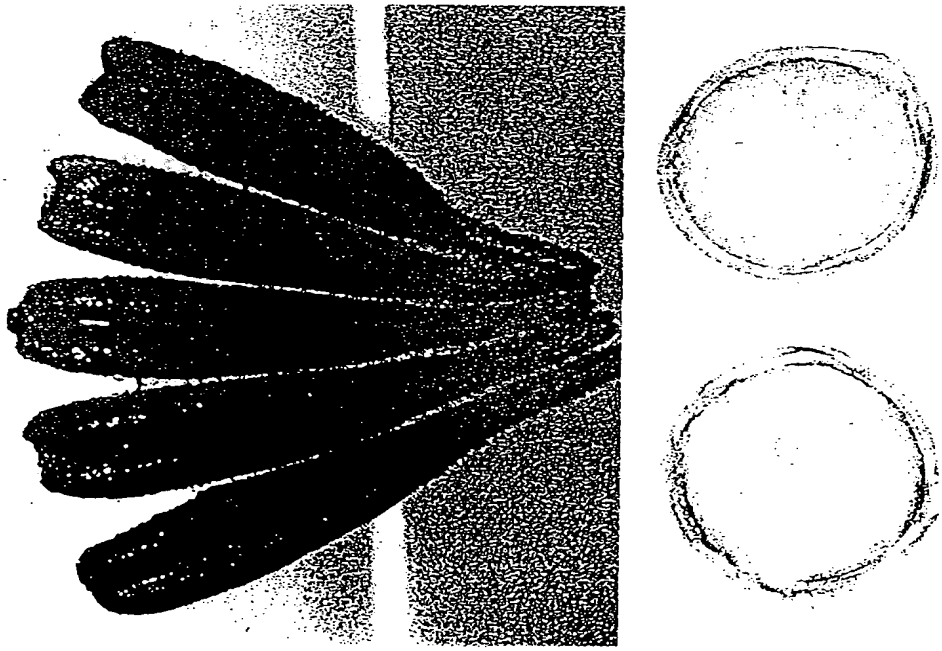


Fig. 12

LP1-8



WT



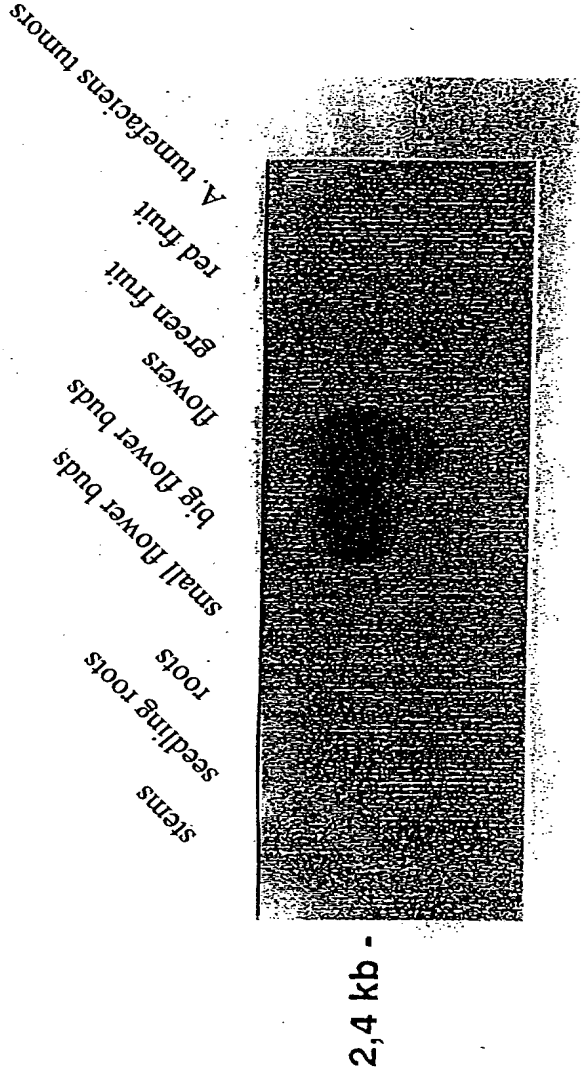


Fig. 13A

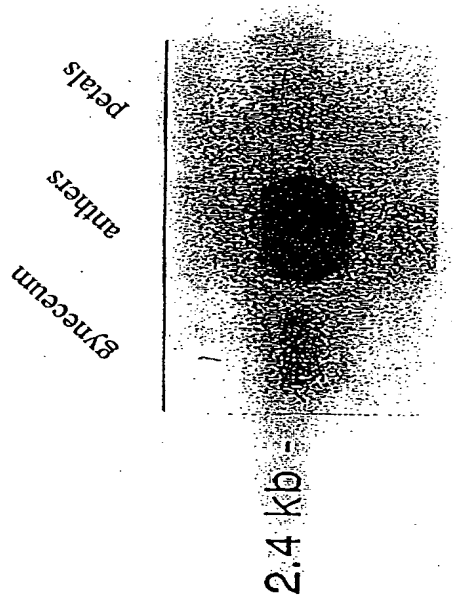


Fig. 13B

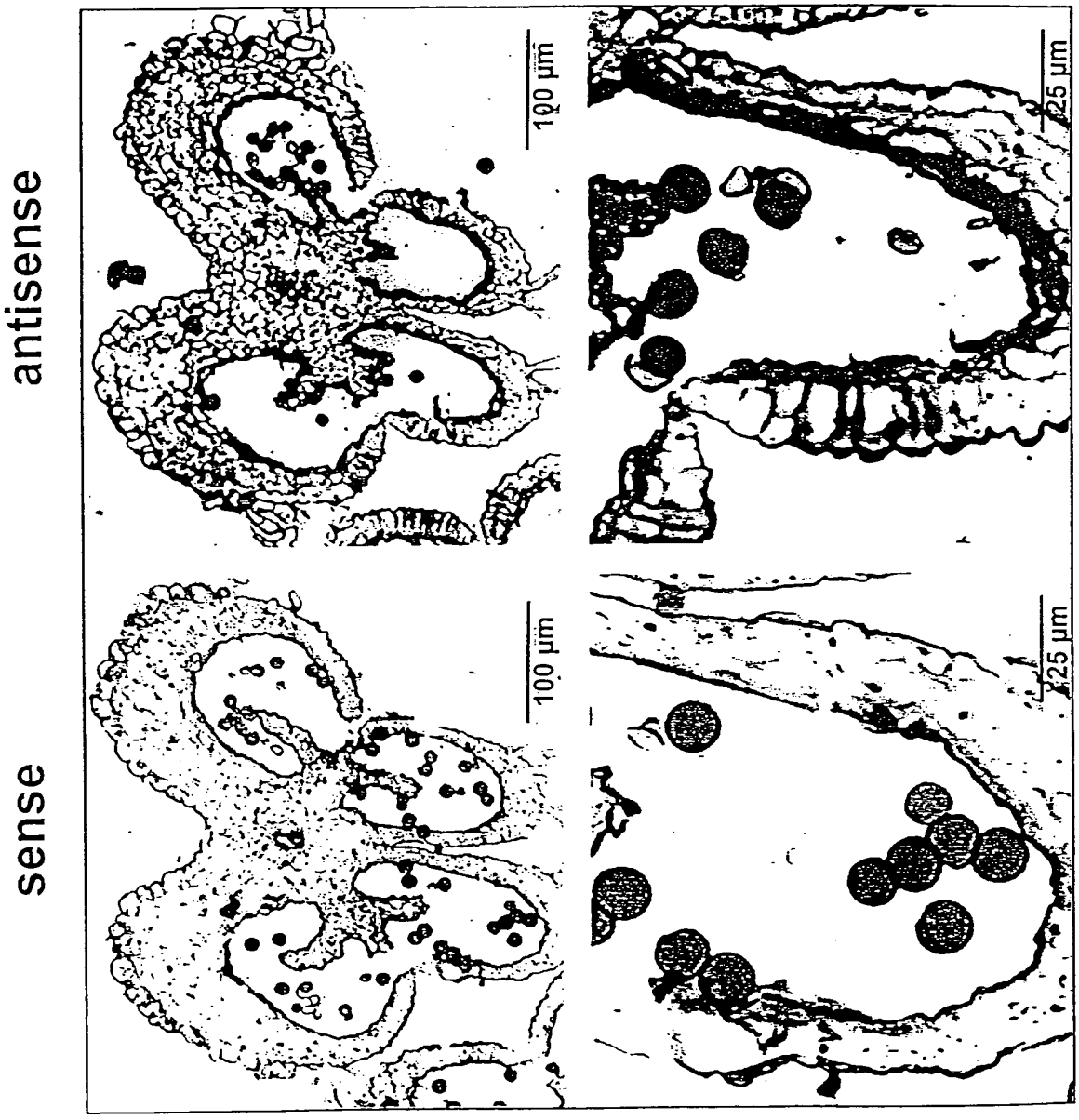


Fig. 14A

Fig. 14B

Fig. 15A

Genomic sequence of NIN88

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 101  TCAATTATGA CGTTTTTACG TGCTTCCAAT CCTCAAAAGA TGCTAATATC
 151  ACTTCTAACT ACAGAACTGG TTACCATTTT CAACCCCCCA AGAACTGTAT
 201  GAATGGTACG TTTCTCTCCC CTTCCACCCA CCCCACCCCC TCTTCTGTTG
 251  TTGCTTTTGA TATGTGTATA TATATATATA TATCCATTTT TTGCTCGGTA
 301  TCGGCATTAG GATCCACTAA ATTCGGCATT GAGGGGTAAT TAGGCGTCTA
 351  ACAAAGTCAA TTCCATAACT AGGGCTCGAA CCCGAGACTT CCGATTAAAA
 401  ATGAAGGAGT ACTTAACACT TATTCTGTAA CATTAAACAA TAGACATCCT
 451  ACTCCTCTAA ACTCATTTGT ATTTTTAAAA TATCTATTTT ACCCTCGATC
 501  TTATTAGCCT TCATCTACTT TTTTTTTTTT TACTTTTTTA ATATCACAAT
 551  ATTTTCTTAT TCTATGTTAT GAATTTACCT ATAGTGAACA TAAAATTTAA
 601  AAAAGGTGAA AAACAATAAT CAATCATATA CTTATTGAAG TTAGAATAAT
 651  GAAACAAATG GGCGCAATTA AAATATTAGA ATAACAGATC TTATTAATAT
 701  CAATCAAATA AAATTTAGTT CAGTAATATA AAAAAATAAT TAAACATAGA
 751  GGTAGATTTT CTAAGAAATT CCTAAAAGAT TATATATTTA TAACTTAGAA
 801  AATATTTTGT TAATGAAAAT AAATATTCAA AGATATATAC AGAACAACAA
 851  CAACAACCCG ACCTTACCCC TACCCTGGGG TAGAGAGACT GTTTCCGATA
 901  GACCCTCGGC TCCCTCCCTC CAAGAACTCC CCACCTTGCC CTTGGGATGA
 951  CTCGAACTCA CAACCTCTTA GTTGGAAGTG GATGGTGCTT ACCACTAGAG
1001  CAACCCGCTC TTGTCCGAAG ATATATACAG AAACATGTAA TAAAGAATAA
1051  AAGAGAAAGT AAAACTTAAA TATATAGATA ATATTAATGT AACGATAAAA
1101  AAGAGTAACG ATAATTGTTT TTGCAAATTC ATAAAGGTAT TATTCTAGTT
1151  AAATTTTATT GAGTTTTAAT TATATAATTT ATCATAAGAT ATTAAAATTG
1201  GTAAAATACT TAGGCTAATG ATAAAATACA TCTTATATAA TATTAAAAAA
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1301  TAGGAGGAGC GAAATATATA TTATTTAGTG TTGGAAGAGT GATTTGATTT
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1401  TCCTACTGAA ACACGTGTGA GTTCCAAAAG CAAAAAACGA AAAAGGAACC
1451  AGCTCCCTAA TAATGAGTAC TTATTATACA AGTAAATACA ATTAGAGGAC
1501  ACTAATTGCA ACCCCCTACT TGGGAACTGT CGGCCTATTG CTTTAATTAC
1551  TTATACTCTC ACTCCGTTCA CTTTTACTTA TCCAATATTC TAAGTGACAT
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1651  AAAATGTTAT TTGAAATTTA GAGTTACGTT TGGACATGAA TATAATTTTG
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1751  GTTTTTTGAA GTTTTTCAAA TTTTCGAAAA TTTTCAAAAT GCATCTTCAA
1801  ATGAAAATTG AAAATTTTAT GAACAAACGC TGATTTCGAA AAAAAAGTGA
1851  TTTTTTTGTG GAAAAAAGAA AAAAATTTCT TATGTCCAAA CGGGCTCTAA
1901  AAATAGATTT TCACTTTTAC TTGTCACTTT TCGCATATCA AGAGAAGACA
1951  ATTTCTTTTT TTCTGTTATA CTCATAGTAT TAATTACTCA TTTCAAATCA
```

Fig. 15B

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2101 TAGACAAGTA AAAGTGAATG GAGAGAGTAA TAAATTACAC CTACTTTCTT
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2201 TTTTCTTAAT TATATTATAT TTGTGTGTGA TATGGGCAGA AGGGGTTGGT
2251 AAGAAGGATC TTGTCCCCAT CAGCAACTTA CAATATTTTA GGGAAGACAA
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3151 TAGATGCATC GTACAACGGA AAATATGTTA AGTACGTTCT CAAGAATAGC
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3251 ACAAGATAGG TATATTCCAG ATAACACTTC AGTCGATGGT TGGAAAGGAT
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3351 AGTAAGGACC GAAGAATCGT GTGGGGTTGG TCTTATGAAT TAGATGGTCT
3401 CCCCAATAAT GAAAACAACA AAGGATGGGC CTGGAATTCA GGCTATCCCG
3451 CGTAAAGTAT GGCTTGATTT CAGTGGTAAA CAATTAGTTC AATGGCCTAT
3501 TGAAGAATTA AAAACTCTAA GAAAGCAAAA TGTCCGATTG AGCAACAAAA
3551 GGCTGGATAA TGGAGAAAAG ATTGAAGTTA AAGGAATCAC AGCGTCGCAG
3601 GTTTAGACTT TTTTCTAGTT TTTAATTTGC AAGCATTTTA AATAAAATTT
3651 TCTTCACAAG TTAAGGCTAA GTTGGGACAT CTATTGAAAT TGCCAGGCTG
3701 ATGTTGAAGT GACATTCTCC TTCTCTAGCT TAGACAAGGC AGAGCCATTT
3751 GATCCTAGTT GGGCTGATCT TTATGCACAA GATGTTTGTG CAATTAAGGG
3801 TTCAACTGTT CCAGGTGGGC TTGGGCCATT TGGCCTTGCA ACATTGGCTT
3851 CTCAAAACTT AGAAGAATAC ACACCTGTTT TTTTCAGAGT GTTCAAAGCT
3901 CAGAATTT

Fig. 16A

Sequence of NIN88 promotor fused with NIN88 antisense

```
   1  TCGAGCCATT CATGTTCAGC CCATTCTGGA AAGTTGCTAC AACCATTCCT
  51  TCTGATACAT TCGGTAAGGT CATCCTTACT CTGTTGAATC GAGCGAGGAA
 101  GTCCCTCAAT CCCTCTCCGA GTGATTGTTT GATGGCAAAT ATATCGTTCA
 151  CTCTTGCCTC CGCGTTTTTA GCCCCAACAT GGGCCATTAT GAACTTGTCG
 201  GCCATCTCTT CGAATATTTC AATGGAGCGC GCGGGCAGCT GTGAATACCA
 251  AGTCAATGCT CCTCCGGTAA GGGTCTCGCC GAACATTTTC AACAAGATGG
 301  AGGAGACTTG TTCTTTGGAG AGATCATTGC CCTTTACCGC AGTGACATAA
 351  TGATTACATG ATCTTCGGGG TCGGTCGTAC CATCATAAAT TTTCAGATAA
 401  GGTGGCATCT TGAACGTCTT GGGTATGGCA TATGGGGCGG CTTCATCACT
 451  GTAGGGTTGC TCGACTAACC GACCAGCGTC TCTTTTTGGA AATATTTTTG
 501  GGGCACCCGG TATTTTATCG ACTCTTTCTT GGTGTTCTCT CATTTGATCC
 551  CGAAGCATTT TATTTTCGTT TTCCATTTCT TCCATTTTCT TCAGAATGGC
 601  CGTGAGGGTG TCATTACCTG CATTATTAAT ATTGTGAGTG ATACCTGTTA
 651  CTGAAGGGGG AGGGTCGTGC TGTTTGGTCA TTGCTGGTGC AATGCAAGTC
 701  CTTGCATTTT CTCTAAATAC CTCCTGAGTG GGTTTGTTGA GGATGCCGGT
 751  CAGCATATTT GTCAGCCAAG CTTCGAGTAG CTTCTTCACC GCTGGTGGCG
 801  CCTCTTCCGT TGTGGACGTG GAAGCTCCTT TACCGCGGGA TGTTGCGATA
 851  CTGCTGTGAG GGAGGGGTGA TCCACTTCGT CGGGGAGAGG TGTTAGGCGT
 901  TATGCCTTCG CCTTCTATTT CGGAGACCTC ATTGATGGTG TTTAAGAGGT
 951  TGGTAGTGAG ATTGGCCACT GCCTTCATCC TTTCTTCTCC CTTACCTGCC
1001  ATGTCAGATC TGGGTGTACA AGGAAGTAGG AGCTTCTCTT CTTCTTTTTT
1051  GTGAATTGTG CCAGTTATAG ATCTAAAAGA AACTAAAGTT TTAACTAGAC
1101  TATCCTCACA GACGGCGCCA AATTGTTTGA CCAAAAAATA TAGACTTTTG
1151  ATTAAATTAA TTAATATTGT ATGACAAAGG ATTAAACCTA GTTAATGATA
1201  ATAACTTCAG ATCTATAATC AATTAACAGC AATCACGGTC ATAGCAGCGT
1251  TGAGAGAAGA TTAAATGTGA TGTnCATTCA ATATTTCAAG ATCATTAATG
1301  ATAGGGGAAT ATCAAGCAAT AAATAACGAT AAATGGCATT AAAGTAAATA
1351  AGGAGAATGA TTCACCCAAT ATTGAATGAG GTGGATGATT CTTCTTTTTG
1401  ACAATGATGA ATGATGGnCA AATACTAGAA TGTTGGGACC CTTCTCGGAT
1451  CTAATGAAAA AAGTATGGAA TAGTAGATAA TCGAATCTCT TTAGAAAGGT
1501  AGTGATTGTC TTTTATCTAG AGAGAAAGTC TGCTTTTCAA AGAATATTTT
1551  TATCAGAGAA TATTACATCC CCCTCTCTCC CTATnTCTTT TTCTATTTAT
1601  ATGGGACATT CCTCAATCAA TCCTAAAAGT ACATACACCA AGAATATTCA
1651  ATAAAATATT TTTTTGAATA TTCTATTATA AAAACTAGCT GTTAGCACTC
1701  GACCTCGGTC GnTATTGACT ACTCGGTTAC GAGCCCTGTC ATTTACTAAT
1751  CGACCTCGAT TACATCACTT TCTACGATAC TGCTTCATGT CAAATCTTAA
1801  TGAAAGCAGA TTTTGACCCA TACAATAATA TGACAAAATT GCTTCCAAAG
1851  AAAACATGGC TCTTATAGTG AAATATCGTT AGACTGTTAT AGAAAGATCT
1901  GAATTTATTT ATAAGAATAG TGTTTTTTTC TTTTCTTTTC ATATCTAAGG
1951  AGTAAAGCAA CCATGAATAG AAAAGGCTTA GTAACTATAT ATCAAAGGAA
2001  TGGTGTTTTT TCTTTAAATA TGGATAAAAA TTTGTGAATA TAGAAGATTA
2051  GATCAATTAA CAAAGGTTAT GGTGGAGTGG TAAGCAGAGG CGGACCTATG
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Fig. 16B

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2101  TGTTATAGTA AGGGGTCACC CACTACTAGA AATCCGGTAA AGATCGATCA
2151  AAAAACCGAC CAACATTGGT CGGTAATGGC CAAAAACTGA CCAAAACGCG
2201  ATCATTTACG TGTGAACGGT ATTTTTATGG TCGGAAAGGA ATACCGACCA
2251  AAGTTGGTCG GAAATTACCG ACCAACTTTG GTCGGTCAAT TAAATTCAAA
2301  AAAAATATTG TAAAAAAAAA CCGACCAAAG TTGATCGGTA TTTTAATTAT
2351  GTAATAAAAA GATTCACTAT CTGGGAATCG AACCGGGGTC TGTACTATGG
2401  CAAGATACTA TTCTACCACT AGACCATTGG TTCATTTTGT TTTAAGACTG
2451  TCTTTTATTT GATTTATACT CTTTAATTAT ATTTTTGCAC GAAAATAACC
2501  GACCAAAGTT GGTCGATTTT ATTAAAAAGT AAAATTACTT ACCAAAGTTG
2551  GTCGATTTTT TTAAATGATC CGCCGAATTA ACCGACCAAT TTTGGTAGGT
2601  TTTTTTAATA TTAATTTTTA TTTATTTTAA TTGAAAAACT AACCAAAGTT
2651  AGTCGGTTTC TTGAAACATA AATTTCGCGG GACTCAAAAA TAGTTTCCCG
2701  CATTTTTGCG CCAAAGAAAA CCGACCAAAG TTGGTCGGTT TCGTAAAAAA
2751  AAAAAAAATT TAAAAAATAT ATTTTAAAAA ACCGACCAAC TTTAGTCGGT
2801  TTTTTGGTCG ATTTTTTGAC CGACCAAAGT TGGTCGGTCG ACCTTGGTCG
2851  GTTTTTGCCG AATTTCTAGT AGTGACCGAA CCCTGTAAGC TTCGGGAGAA
2901  ATTTTGTATA TGTATATGTG TATATCCTTA AAATGATTAA TTTAAAGAAC
2951  GnnGCACCCT GAATACTAGA AGCCTTTAGG GGCACTAGAT GAGCAGAATA
3001  ACGTGTTCTC GTCGCGTAAA AATACTTGGA TCCGCCTATG ATGGTAAGTA
3051  CTTCTTCGTC CTTAATCAGA GGTTTCGACT TCGAGCTCCA GATATAAACT
3101  ATAGACTCGT CTTTATAGCA CCTTTTAATA AGACTATGAC TTCATCTGAT
3151  TTCTCTATAA ATACTCCTCA AGCTTTCGGT TCTTCTCCAT TGTTCAGTTT
3201  CTTTCTCCAC ATCACAGAAG TGAAAACAAA ACAAGAAGAA GAAGAAGAAG
3251  AAAAATAAAG AGTTTCTGTC AAATTAAGTC CAATAGGGAA AATGGAGCTG
3301  TTTGGATCCC CGTTTTCATT ATTGGGGAGA CCATCTAATT CATAAGACCA
3351  ACCCCACACG ATTCTTCGGT CCTTACTAGG GTCGTAGAAC GACTTAGACG
3401  CGTAGAAAAT GCCATAGTCA AGTCTCAATC CTTTCCAACC ATCGACTGAA
3451  GTGTTATCTG GAATATACCT ATCTTGTTTG GCATCATATG TACCAATTGT
3501  GTAGTACTCA AACGCGGCAA CAGGAAGGCT ATTCTTGAGA ACGTACTTAA
3551  CATATTTTCC GTTGTACGAT GCATCTAAAC CATTAGAACC TTGCAAGGAA
3601  ACAGGAAAAA AATCTGGGCA TTCCCAATTT CCTGTTTTGG CAGATGAATG
3651  AAGTGGATGC TCAGCCTTGA TCCATTTCAT GAAATTCCTA CTTCTATACA
3701  ATATTGCCAA CCCACCACGG TTTCTTGAAC TTCCTACCAC AATTCTCCAA
3751  TGACCATCTT TGCCCATCCA AGCTGTTGTC GGGTCACGAA ATTGGGTCTT
3801  GGTGATGCTG ATATCCGGGA CGATCAACGG GTTGTTATCG GGCTTGTTCC
3851  ATTCACGGAG ATATGGATCG GATAAGTTGG CCGGGACGGC GTAATTTTGG
3901  ACTTGGGTCA TGTTGGCATC TACCACTCCA GTGTACAAAA TAATGGGCTT
3951  GTTACCAGGG AGAATAGTTG CTGAACCAGA CCATGTTCCA TATTTGTCAA
4001  ATGGTTTGGA TGGATAAATT GCAGGCTCTA AATTAATCCA ATTGATTAAG
4051  TCTTTTGAGA CTGAATGAGC CCAAACAATG TTGTTCATTG TTGATCCTTT
4101  TGGATTGTAC TGGTAGAATA GATGATAGAC TCGAG
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Fig. 17A

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   1  CATAATCAAA TGTGTGGTCT TATGTAGAAC TAATATTTGG TAATATTAGG
  51  CAAGTTGTTA TGTGACTTAT TTTATTCAAA AATATAATAA GAAGTTCAAA
 101  GAGAAGAGTA CAAGTAAGTA AGTAAGCAGA GACGAATCCT GGATTTAAAG
 151  GGTCTGGCTA TATTAATGTT TTTTTAATTT AAGCATTAGC GATTCGCCTT
 201  GCAAGTAATC GATAGGACAA AAGTTTTACC TTACTAATTC TATTGAGGCA
 251  CCAAATCCCT ATGAAAAAGC ATGTAAAATA TGAGAAGACG AAAGAATTAA
 301  ATAGGTTATA ATTATTGTAT AATTTATAAC ACACTTTATG ATAATATTAC
 351  AAATAAGAAT ATCGAATATT TAATTAATGA CGAACTATAA AAGCAAAGAA
 401  GGAAGGATGA GCTTCCAAAA ACAATCGCAA ATGAATAAAG ATGCCCAAAA
 451  TAGAGTAACC TAACGAAGTC GATACTTCCA TTCATAATCA AATCTGTTCA
 501  AAAACACTTG ATGGGTTATT TTTAACTTTA AGAGATGTAT CATATCGTCT
 551  CTTATTATTC CTTTAGGGCT ATTCGCCGTA GGAATAAAAT TTATATGATC
 601  AAATTTCACG TTATATAAAT AATGTGAAGA AAAAACTTAT ACTTTTCAAG
 651  GTAACAAGAA ATCATGTTTT TTTTACGCCT TCGTGGAGAC TACTTCCTCG
 701  TAACAAAAAA TTAACATTTT AAGTGGCGAC TCTAAAAACT CGTGGCCAGT
 751  ATATTAGTCG CCATTAAACA TTATTTTTAA TCATGAGTTC TTTTCTTTTT
 801  TAATCTTTTT TTAAGGTCAA ATTTACCACT TTATCTTATT TATTTAAATT
 851  GAAAAATCCC AAATTTTGCA TTATTTTTTT GAATTCCTTT TTTTTTTACA
 901  CACTCAAAAA GTCAAAACAT TAAAAAAACG AAATAGCAAA TTAAATGGCA
 951  AAAGACTTGT TGTAACAAAA AAAAAATAGT AAAACAGACT CATAAAAGGT
1001  AACAATAACC AACAAATCAC ACAAAATTGT AGATAAATAT TATGCAAACA
1051  AATAAAAATT AATAATCCAA TCCATTTATT TATTTTTTTA AAAAAAACCT
1101  AAATTAACTC TCCATCTTTC AATCAAAAAC AAACTCTACC CATTTTTTTC
1151  ACTATAAATA CTCTTCATAA TTTTCATTTG TTCTTCATTC CCATGTTTCT
1201  TTTCTCCTTA TCCAAAAAAA AAAAAATTAA AAAAAATTAT TTAGATTAAA
1251  TATCACTATC TGTCAAAGCC CAATCATTAA AATAAAATAA AAATTATGGA
1301  TTATTCATCT AATAAAAGTT CTCGTTGGGC TTTGCCAGTT ATCTTAGTTT
1351  GCTTTTTTGT AATTTTATTA TCCAATAATG TTGTTTTTGC TTCTCATAAA
```

Fig. 17B

1401 GTTTTTATTC ACTTGCAATC TCAAAATGCC GTAAATGTTC ATACTGTTCA

1451 TCGAACTGGT TATCATTTTC AGCCCGAAAA ACATTGGATC AATGGTATGT

1501 TTATTCCTTT TTTTCGTCTT TTTTTTATAT ATATATATAT AATAAAACGA

1551 ACATGTTGTG TTTAGTCTAG ATTTAATACT AGTGATTTTT TTGACGCTAA

1601 CAAATAATCG AGTACTCACC ATTTGTCAAT AGATACATTG ACATGTATTA

1651 GTATGATTTT CGTCTTTTTT CGTTGTTTCT AATATTATTT AATCTTCACT

1701 AATTTTTTTA TTTTTCTTTG AATGATGTCT CTTGGTCAAA ACATACAATA

1751 GATCCCAATG GTAAGTTAAC TATATTTTTG TATATTTTTT AAATTTATTT

1801 TATTCTTATT ATATAATATA GGGAAAAAAG GATAAATATA TCCCCGAACT

1851 ATTATAAATA GTATGCACCA GTATCCTCTG TTATACTTTA GAGATATTTT

1901 TGCCGTCAAA AAACTAGAAC ACATATATCC TTTATTTATC CCGATATCGA

1951 ATCGATTGTA CCACGAGTGA AGGGTATAGC TCTAGTTTTG GACGGTAGGG

2001 CACCTAAAGT AGACGAAGA